

Achieving Resilience in the Energy Transition to Safeguard Indonesia's Economic Growth & Sustainable Development

IPA Conference & Exhibition 2023

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Introducing the IPA and Wood Mackenzie's White Paper

Purpose, methodology, structure



● Purpose

- » To determine how Indonesia's E&P sector can best collaborate with the Indonesian Government to support and participate in Indonesia's Energy Transition

● Methodology

- » An independent mapping of the priorities, opportunities and challenges faced by Indonesia's E&P sector
- » Consultation across a wide range of stakeholders
 - » ESDM, Migas, EBTKE, SKK Migas, DEN, BKKME, MoF, DPR RI, IPA
- » Fact-based insights and recommendations developed via in-depth analysis

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Executive Summary

1. Overview of the Energy Transition

2. The Energy Trilemma

3. The Energy Trilemma in Indonesia

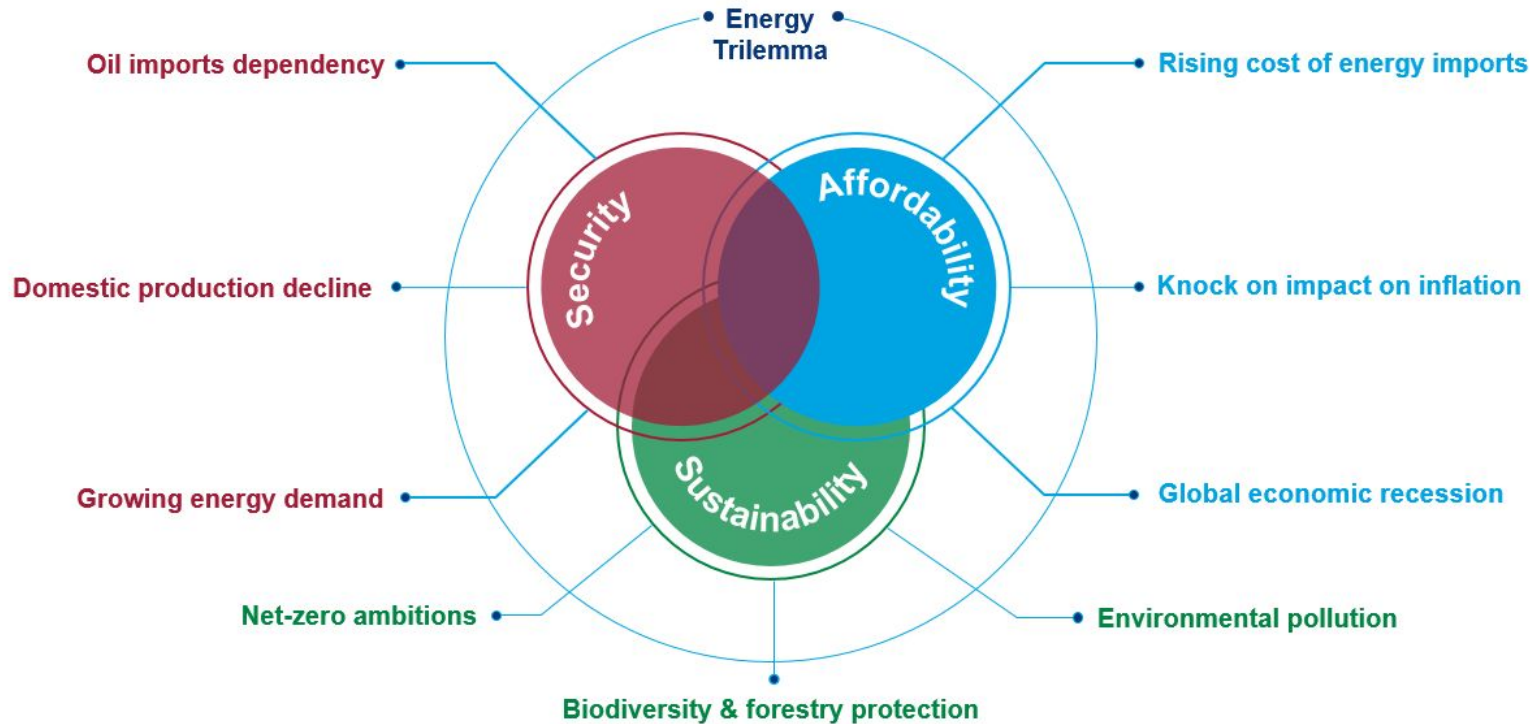
4. Growing Domestic O&G Production to Address the Trilemma

5. Developing Domestic CCS / CCUS to Address the Trilemma

6. Conclusion & Next Steps

Indonesia's Energy Trilemma

A short-term focus on security and affordability, with implications for long-term sustainability?



Key questions that will determine Indonesia's future energy landscape

- **How quickly will energy demand grow?**

 - » *The implication on power generation in particular is key*

- **How quick and effective will be the reduction in coal power generation?**

 - » *The impact of regulatory exceptions and the financing of early coal retirements remains unclear*

- **How quickly can renewable power be scaled?**

 - » *Considered in the context of wind/solar resource scarcity, infrastructure readiness, intermittency and economic feasibility*

- **What is the value of Indonesia's domestic oil & gas production in achieving energy resilience?**

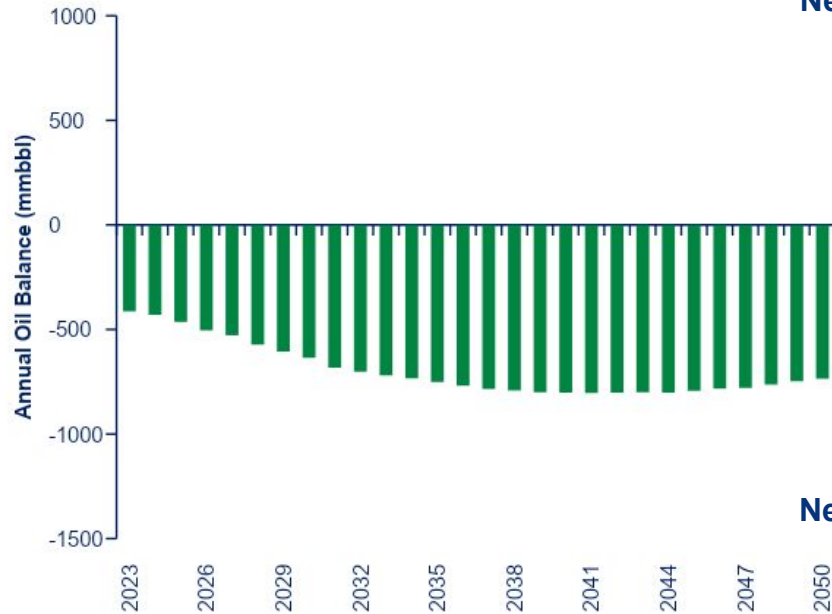
- **What role should CCS/CCUS play in Indonesia's Energy Transition?**

 - » *Currently the only readily available and operational method of decarbonization solution*

What is the value of Indonesia's domestic O&G production in achieving energy resilience?

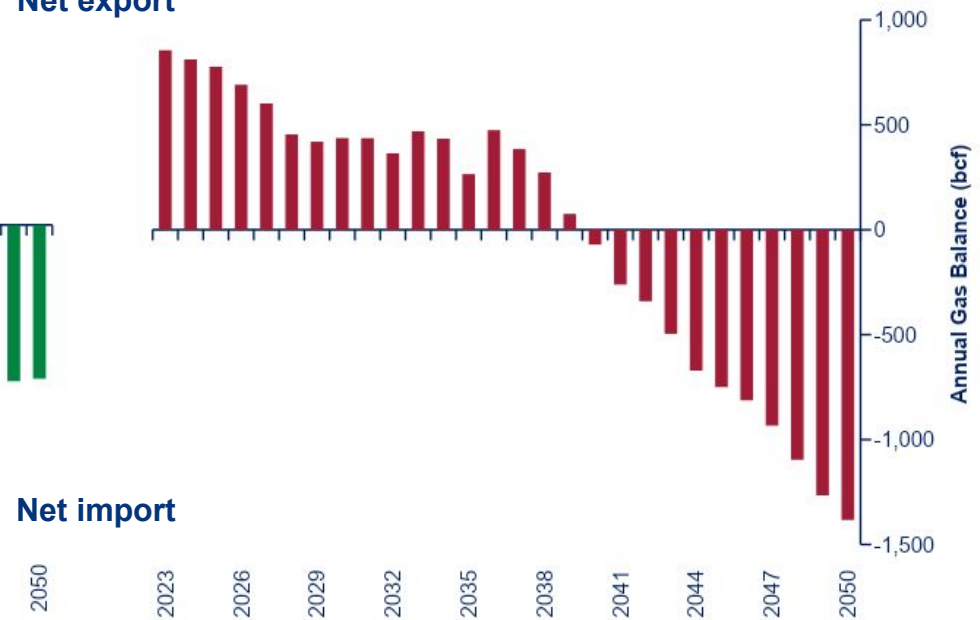
Existing oil import dependency set to rise; shift from net gas exporter to importer next decade

Indonesia's oil supply-demand balance



Indonesia's gas supply-demand balance

Net export

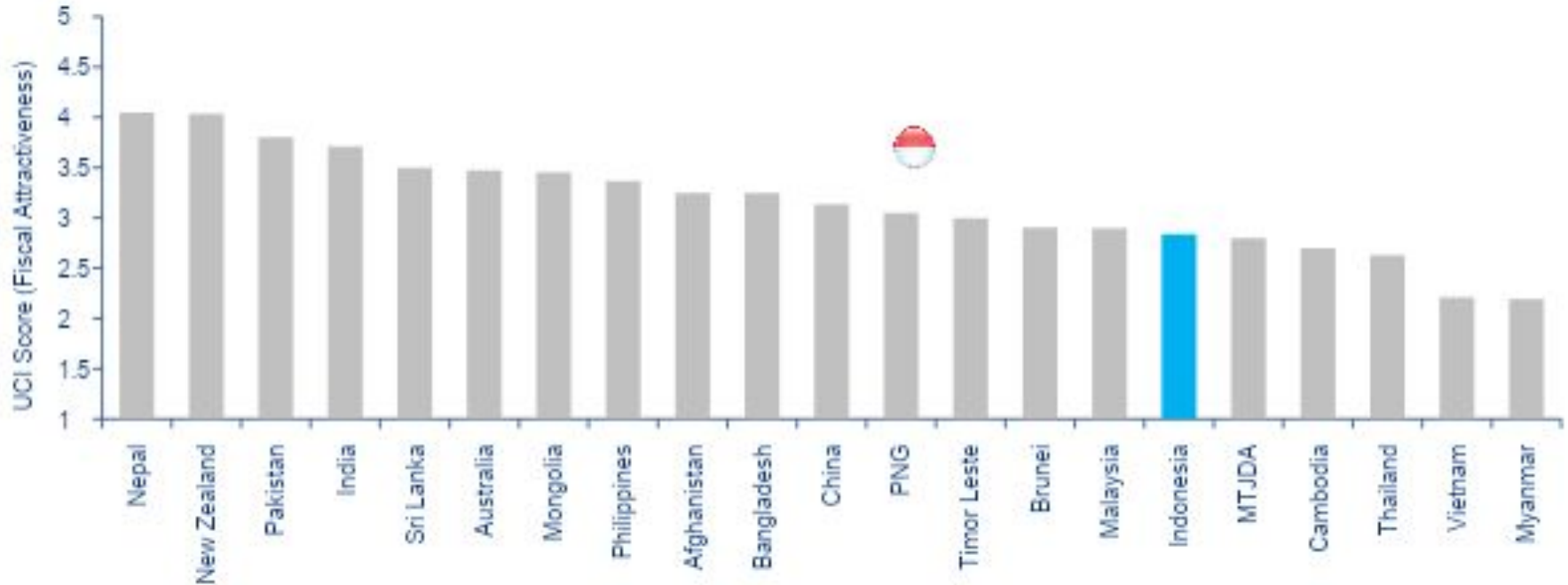


Net import

Fiscal competitiveness is one of the key areas targeted for improvement

Improvements in recent years are positive, but more drastic action may be required

Wood Mackenzie's Upstream Competitiveness Index (UCI) Scores (Asia-Pacific only)



Four areas of improvement that can increase Indonesia's attractiveness

Increased investment can connect Indonesia's resource potential with rising demand



Fiscal competitiveness

- » **Issues:** Limited incentives for existing projects; lack of flexibility in government share and cost recovery can hinder financial viability and attractiveness relative to peer regimes.



Fiscal stability

- » **Issues:** Unilateral changes in policies, uncertainty in assessing the impact of terms, and regulatory delay pose challenges for long-term planning



Ease of doing business

- » **Issues:** Delays in project approvals, regulatory misalignment, limited visibility on future CCS initiatives can all increase complexity and costs of CCS development.

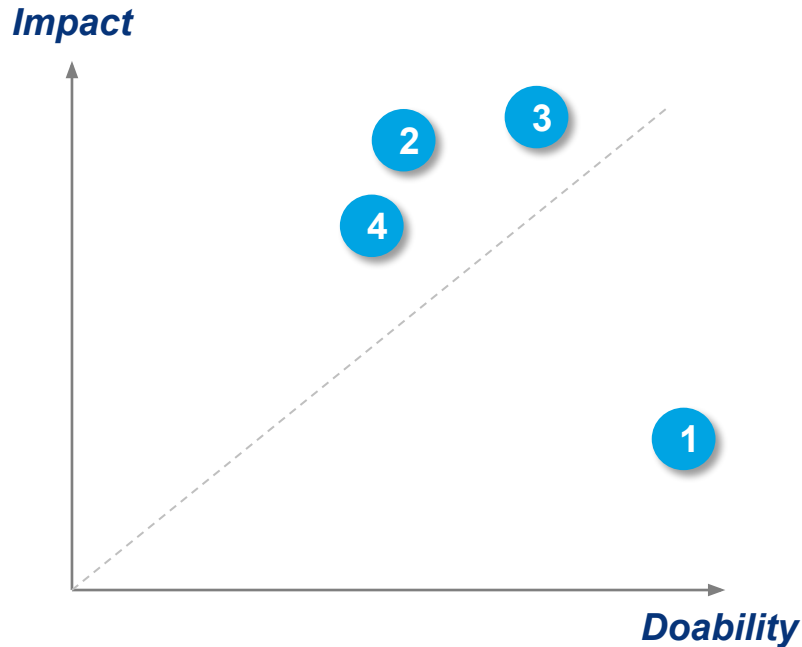


Net-zero E&P investments

- » **Issues:** Limited provisions for emissions reduction for Scopes 1-3 and offsets impede investment from environmentally conscious investors with corporate sustainability goals

Four recommendations to revitalize Indonesia's Oil & Gas outlook

Action plan for fostering investment in Indonesia's E&P sector



1. Long-term Energy Roadmap

- Inclusive of energy transition objectives and outlines the roles different energy levels play in Indonesia's future decarbonized energy landscape

2. Overarching Legal Framework

- To regulate all E&P activities, enhance regulatory stability, transparency and ease of doing business

3. Enhanced/Redesigned Fiscal Regime

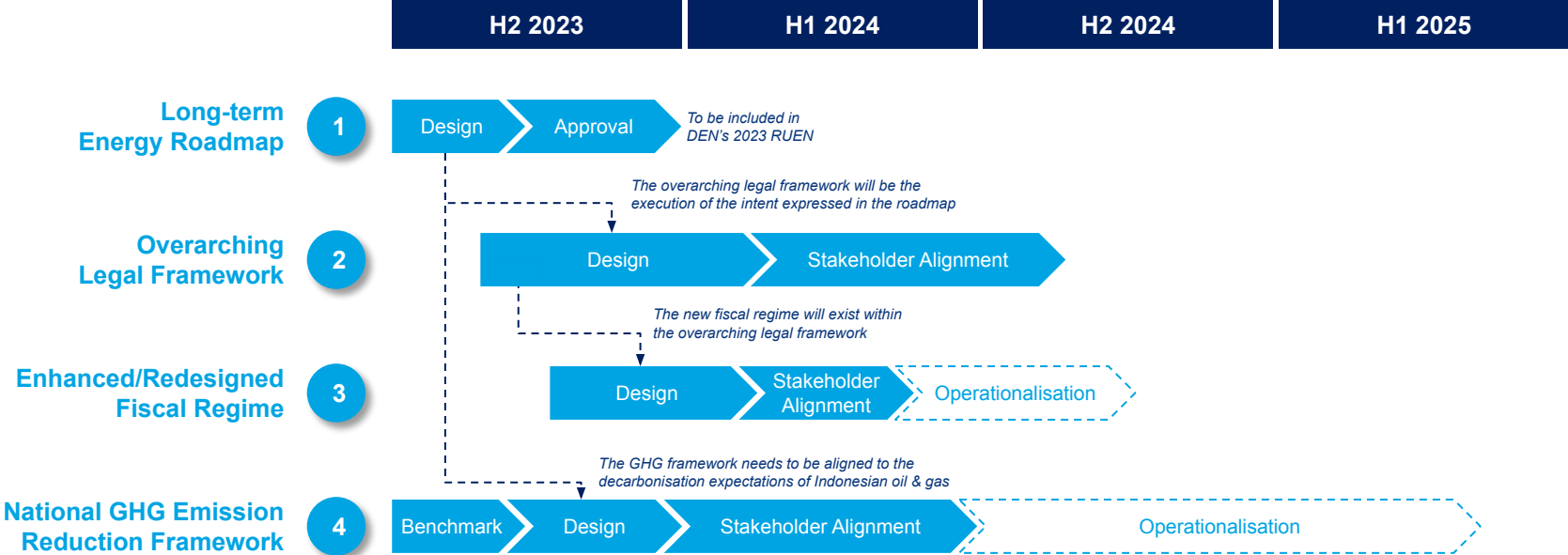
- Identification of potential enhancements to improve fiscal competitiveness

4. National GHG Emission Reduction Framework

- Aligned with international best practices to promote a "low-carbon" O&G sector

These four recommendations would take less than a year to reach operationalization readiness

Roadmap and next steps



Attracting Capital for Indonesia O&G Investment to Secure Energy Transition

Panel discussion with respo~~nde~~es

- Ministry of Finance
- SKK Migas
- National Energy Council
- Malaysia Petroleum Management
- IPA

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Europe	+44 131 243 4477
Americas	+1 713 470 1700
Asia Pacific	+65 6518 0888
Email	contactus@woodmac.com
Website	www.woodmac.com

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